Date: June 19, 2007, 9:00 am

Meeting with former Hanford workers to discuss Special Exposure Cohort Petition Numbers 50, 57 and 58.

Attendees: 32 former employees

NIOSH and ORAU Team

Sam Glover- National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS)
Laurie Breyer-NIOSH/OCAS
Chuck Nelson – NIOSH/OCAS
Mike Kubiak-Oak Ridge Associated Universities (ORAU)
Ed Scalsky-Dade Moeller and Associates

Also Attending:

Brad Clawson-Advisory Board on Radiation Worker Health (ABRWH)
Kathy Robertson DeMers – Sanford Cohen and Associates (SC&A)
Kirsten Elay – Senator Cantwell's Office
Wanda Munn - ABRWH

Proceedings:

Sam Glover thanked everyone for coming and commented that the crowd seemed slightly smaller than yesterday's meeting. He stated that they had sent out almost 800 letters and he would estimate that about 75% of them had attended. He noted that some of the folks had returned and said he really appreciated them coming.

He explained that he wanted to keep the format open and that the purpose was to get input from the workers and that he would not be spending a lot of time talking. He referred to a prior meeting held on March 28th and explained that this was a follow up to that regarding the very earliest timeframe at Hanford, 1946 to 1990. He welcomed any comments concerning earlier years as well.

He stated that there were individuals there from the National Institute of Occupational Safety and Health (NIOSH), the Oak Ridge Associated Universities (ORAU), the Advisory Board on Radiation Worker Safety and Health (ABRWH) along staff from the Department of Labor and members of the Congressional Staff and invited everyone to introduce themselves.

After the introductions he explained that he had not prepared any handouts for the presentation and informed them that if they wanted to contact them for any reason they could find that on the letter that that they had received from Laurie or they could speak to them after the meeting and they would be happy to provide that to them.

He then turned the meeting over to Laurie to give a brief explanation of what is an SEC and what they were there to talk about.

Laurie Breyer started out by saying that many of them had already filed claims under Part B or Part E and were aware that Part B is for cancer related claims from their exposure to occupational radiation. She explained that their claims are submitted to the Department of Labor (DOL) with their medical information, their employment information and the types of cancer that they have. After that it goes to NIOSH and they do what is called a Dose Reconstruction. She said that many of them may be waiting on the dose reconstruction or may have already had the dose reconstruction done, but after the dose reconstruction is completed by NIOSH it goes back to the DOL and they make a decision as to whether or not the claim is compensable or not.

She explained to them that there is also something that is called the Special Exposure Cohort (SEC) which is different from an individual claim in that is for a class of workers for whom sufficiently accurate dose reconstructions cannot be completed and that when the law was passed, four classes were included in that cohort and they were: Amchitka, Paducah, Portsmouth and K-25 in Tennessee. However, she said, the law also created a way for people to petition and ask for another class of workers to be included in that cohort and that their purpose today was to discuss the petition that was submitted to a add a class of Hanford workers to the cohort. NIOSH is in the process of evaluating that petition and they were there to talk about the attendee's work in support of that petition and not to talk about individual claims because individual claims go through a different process.
She continued to explain the difference between an individual claim and an SEC petition saying that individual claims are eligible for any type of cancer except chronic lymphocytic leukemia and that under the SEC you have to meet certain criteria to be in included in the class. The criterion for that is: you have to have 250 days of employment at the facility for the class that does get added, or at multiple facilities that are SEC facilities, you have to meet the class definition, and you have to have one of the 22 specific cancers. Therefore, she said, an SEC is somewhat more limiting than an individual claim.

She concluded by offering to talk with anyone who had questions about that after the meeting.

Sam Glover stressed the point that a dose reconstruction would not be done if the claimant has one of the 22 cancers and is part of the SEC. Those claims are automatically paid, therefore, there is not a dose reconstruction completed on those cases.

Sam continued his explanation of the program by giving some background information about the 3 Hanford petitions: Petition 50, January 1, 1943 to September of 1946, Petition 57 and Petition 78. He stated that because; they all happened at the same time, they are all very similar, and they have overlapping timeframes; they were all merged into one petition.

For the purpose of evaluation they had been split into two separate time periods: the Dupont years, 1942-1946 and then the remainder. They had issued a report recommending to the Board that an SEC class be added for folks who should have been monitored for plutonium bioassay during that time frame and were there to discuss the 2nd part of that; Petition 50, very briefly, covers the period Jan 1, 1943 to Sept 1, 1946 and the petitioner proposed a class for all production workers in the 100 areas, 300 areas and all 200 area production workers and all

guards and construction workers. The class being evaluated is all workers from Jan 1, 1942 to Sept 1, 1946. The principal issues identified are that the DuPont employee records were lost, the bioassay monitoring was not conducted and the environmental release studies were flawed.

Petition 57 covers the periods January 1, 1942 to December 31, 1990. The proposed class definition was all employees in all facilities and areas of the Hanford reservation during that time frame, and the class being evaluated is the same; all employees and all facilities and areas. The principal issues identified in the petition were; employees listed in the petition did not have monitoring records for all the periods of employment.

Petition 78 was fairly specific, April 25, 1967 to 1971 and the proposed class was all roving maintenance carpenters and apprentice carpenters that worked at the 100, 200, 300 and 400 areas. The class being evaluated is the same and is being evaluated as part 2 of Petition 57. Principle issues identified were carpenters and construction workers were not properly monitored for internal exposure during this time period.

He restated the goals of the meeting by saying that the meeting was a follow-up of a meeting that we conducted on March 28, 2007. It was for the earliest timeframe, workers from the 1940s.

He thanked the individuals who had attended the first meeting for coming out again and was glad they had taken the time to provide their input into the SEC evaluation. He assured them that first- hand knowledge about the Hanford facilities and practices was very important to conducting the evaluation.

He encouraged them all to sign in in case they needed to follow-up on issues after the meeting. He stated again that they would not be discussing individual claims due to Privacy Act considerations but assured them that their individual experiences were very important to them.

He stated that they had some specific issues they wanted to discuss and offered some suggested topics for discussion.

- monitoring practices; especially in the reactor
- plutonium separation facilities and tank farms
- monitoring practices for external and internal personal exposures at the various facilities and for various programs
- thorium operations
- high neutron exposure areas
- practices that changed over time
- badging bioassay frequency
- were you on a hot job and didn't have a mask and didn't have bioassay
- areas of high exposure when monitoring may not have occurred or been appropriate
- what radiation surveys were performed in your areas
- did you have a rad tech with you looking at and evaluating the job

- what was the mobility of personal of different job categories and associated monitoring practices at the time
- information regarding incidents and accidents and associated follow-up

He invited them to share their experiences and asked that they please speak their names into the microphone in the event they needed to follow up with them after the meeting.

My name is [name redacted] I worked on the facility from 1985 to 2005 for Hanford with various contractors in the operations arena, in the environmental arena, and D&D. A couple things I do want to question first and foremost is the SEC…this information has been gathered before when we initially filed the claim. They asked for it and all of this information is already gathered and I have provided it in written form, verbally and in interviews with the Department of Labor. I believe this is a typical protocol in filling out this information and providing this information.

Laurie Breyer
Everyone does go through a telephone interview process and supplies for the individual claims information required by the Dept of Labor regarding medical and employment information.

[name redacted]
And NIOSH

Laurie Breyer
It does come to NIOSH and they do a telephone interview with all the workers.

[name redacted]
And that information is already there, and the purpose of this meeting is to gather that information again?

Laurie Breyer
As I said there are two different parts to the process; you have the individual claims which are handled one way, and then someone may have made complaints to the Department of Labor on why they believe that we did the individual claim inappropriately. If that is appealed that through the Dept of Labor they may send it back to us to rework it based on your claim, or they conclude that they believe NIOSH did an accurate dose reconstruction. The SEC is different, there is a different basis for filing a petition and it concerns why they believe that for a class of workers dose reconstructions can't be done; for instance, for all those who worked at Hanford from 1946 – 1990.

[name redacted]
Well I want to disagree with you on that, because that information is already there. By the way, the other question that I have is, past practices and standards were certainly a lot different back in the 80s in the production era compared to what they are now. If that's the type of information you are here looking for, I think you have gradually come to the right place. Monitoring practices were a lot to be left to be desired back then. The way we wore our dosimeters under

our coveralls, a requirement then, now, year later… we shouldn't have done that. But the era, that was a production era oriented mindset that drove that. There are other things that are important to keep in mind ladies and gentlemen, and it's not to put the onus on the individuals here, but also on the agencies that studied and did the bioassay samples. For example, US Testing was tasked and granted the contract to do the bioassay samples, fecal and urine samples. Well, what did happen to US Testing? Why did the EPA fire them? Some of the information from my attorney in Seattle was that they were cutting and pasting information, they weren't doing their job, they were not supplying the correct information, they were falsifying records, my records. My records; when I came down with cancer, stage 3 cancer and esophageal cancer in [redacted], were affected by these results. So credibility is an issue. It's not just individual accidents, monitoring practices, it's other agencies that played a role in determining what that status was. Lot of folk's recordkeeping, all that's vital information, where did they go? Where are they now?

Unidentified attendee
Round file.

[name redacted]
Okay, so the credibility is an issue; the inability to speak directly to, or better yet, to subpoena the ORAU individuals that actually did the model for the dose reconstruction of solubility studies. My attorney cannot even talk to them or subpoena them, why? They did the study; they did the evaluation, not NIOSH. But you can't get them. So it's not just the individual ladies and gentlemen, and please don't take it personal, I'm not pointing the finger at you guys or at any one in here. I'm just saying, there's commonalities that affect each and every one of us and it's not just the individual, but also other agencies, legal agencies that played an important roll in determining where we are today and when we will be compensated or not or added to this class, SEC class of workers.

Another area of concern is NIOSH, ORAU omitted the PU oxide process in the solubility evaluation using this alternate model that is more restrictive in providing doses. Why? Now you might say why are you bringing up all this information. Because that information lends to the credibility of these agencies that I was talking about earlier. And it affects…it affected me and I don't know if it will affect you ladies and gentlemen or not, I can't speak for them.

Sam Glover
I do want to be very clear when we talk about the solubility studies. The purpose of this is just to gather information to make sure we use that in the Evaluation Report. Some of the information the SEC suggests has been collected as part of what you put in the CATI forms, other folks that we identified in the 40s, who are here, provided information that was broad in scope and would not have been included as part of their claim. As they discuss things, particularly in the very early times, as they discuss things they remember different things that occurred, and that is in a different forum. That is one of the reasons why we are here holding this, to allow the further input and we very much appreciate you guys coming out again.

[name redacted]
I understand you are looking for particular incidents and accidents and that's fantastic, but also at the same time, let's take a broader look and looking at the big picture and I know that this is what we had in front of us because everything else around us does affect who we are, what happened to us today and years before.

Dose reconstruction status reports that come out on the site when you are a worker, all of a sudden in 2000 I had one that came out, told me my dose rate, what I had, what I had accumulated for that year, I filed the claim. Two years later after I filed the claim, they came back and revised it at a lower level, something that was done two years prior to that. I don't understand. I don't understand it. Leaded glass? Was it you who said something during that time frame? Not compared to these days, absolutely not. Did it protect you in vital areas? No, only when you had your dosimeter and that dosimeter was underneath your coveralls. Did we have pre-jobs? Rarely, if ever. Did we have post jobs? Rarely, if ever. Did we have automatic hazard job analysis as we do today? Rarely, never, probably never more than anything. Been there done that. Did we have RWPs? Were they followed closely? Were they encouraged by management? The answer is no ladies and gentlemen. If that's what you are looking for that's what it is. I apologize but this is something that is close and dear to my heart, because I lost two thirds of my stomach and I lost 50% of my esophagus. And it has affected my life and the life of my family so, yeah this is emotionally disturbing. Based on facts, based on information that my lawyer has found out, and I do thank you for your time and your patience and again don't take it personal, it's nothing between you and I.

Sam Glover
I understand I appreciate your comments.

[name redacted]
And I appreciate your time.

My name is **[name redacted]**, I came back out here in 1946 after I got hurt in the service. I came out when they were building Hanford with my mother and dad. What I'm here to say is I worked in every area out there and I'm sure that by looking around here I see some of you people who got as contaminated as I did. When you walk into a building and you take twenty steps in to work on a consoel and five steps up, in 2 ½ minutes you have to be out and you are highly contaminated plus the fact that you can't work in another danger zone for a week. 300 mrem? Baloney.

Another concern I have is in 1952, I don't know how many of you people worked in the 310 project at 108B. I did. I went in there to work on one of the units inside with this other electrician and I said, "What have they got all these scales in here for?" "Oh" he said, "you're in that heavy air, that's what that purple smoke is going out the chimney. "Oh" I said, "Purple smoke?" [identifying information redacted]. Another friend of mine's daughter; same thing. She's in *inaudible*…. They can't tell me I didn't impregnate my wife at that time. The other children were born in that same era. Nothing. Don't tell me that stuff isn't highly contamination. Or maybe I didn't impregnate with that. The doctors can't tell you, they don't know. Well who

does know? Only you know, because you're the one that made that child. I'm preaching and I usually do that on Friday's. Thank you for your time and my baloney.

My name is **[name redacted]** and I worked on the Hanford site for 30 years plus. I am a Radiation Health Physics Technician, alias, RM, HPT, RCT. Every time they change my name I get a pay raise, so I hope they are going to change it again soon. One of the things I'd like to talk about being an HPT for 30 some years, there's been a lot of changes in the protection the workers have to use as far as PPE. Back when I first started there wasn't a whole lot of protection, we started out with just TLDs and pencils, there was no supplemental dosimeters back in those days like we have nowadays, where we can tack them all over and look like a Christmas tree. We've come a long way to try to improve our PPE for the workers and hopefully we are going to do better. Obviously this meeting is to find out how our protection was back then, and I feel that not only myself but the majority of the people that worked out there at that time weren't protected like they should have been protected. We had time keepers who kept time about how long we were in high dose areas, but those records were not kept for personal records, they were basically nonexistent and never got into a certain person's personal record. We just did timekeeping for jobs in high radioactive areas so those documents were lost.

Sam Glover
What area did you work in?

[name redacted]
I worked in just about every facility there was to work out there as a Rad Tech, except for FFTF. I worked at 100N in the outages, I worked at Purex. I worked at PFP when we were actually making PU oxide, worked in all the tank farms, exposed to all the unknown vapors and chemicals and all that. One of things I'd like to tell you is that radiation dose reconstruction is fine but, and it's real hard to figure out what each individual took when they have a claim, but I don't feel that there is adequate information kept throughout the years that when somebody does come down with certain types of cancer and illnesses that you cannot make a honest reconstruction of these people's exposures because there were not good enough records taken and I feel that a lot of the records that were taken are no longer there.

The other thing is that the chemicals that we were exposed to back then, as a Rad Tech for years; the chemicals are going to kill you faster than the radioactivity is because we deal with that on a day to day basis. But the chemicals that we were exposed to that you are no longer allowed to use on the site, we had no protection for. We worked in areas where we were protected with particulate filtered masks, but in the same sense we were working in carbon *inaudible*, different gases and stuff in the tank farms where we didn't have charcoal filters and particulate combined for mass production. We were being protected by a particulate not a gas. We had no idea that we were being exposed to these hazards. So, I could go on and on.

At Purex I remember when we first started it back up as a Rad Tech I had to go out into the parking lot and decon cars and clean up cars before people could go home. We were told it was a natural phenomenon but I found 2000 counts on cars that we decon'd so they could go home. It's,… I guess I'm an occupational worker out there too, I mean I still work out there, but I think

if you talk to people individually, instead of in a group, you know people have a hard time getting up and talking in front of people and actually saying what they need to say so you people can make your determination about whether or not this should be a cohort. I'm not good about getting up and talking about it in front of people and…but I'm here because I feel that the workers that were out there doing their job during the Cold War, you know, we knew that we were dealing with hazards. We went and did what we had to do to protect our country and we'd do it again, but I don't think people are looking for a handout. The people feel that they have earned the right to be taken care of and if they get sick and they have cancer or whatever I think the people have earned the right to be taken care of medically. Because we did in a sense fight for our country and we did what we had to do to make our weapons program. I signed in on paper and if you guys would like to talk to me you have my phone number and I would be more then willing to tell you a whole lot more horror stories. But that happened a long time ago and hopefully we can just take care of our future workers that are working out there now so that they don't become occupationally ill and stuff like the rest of us. Thanks for your time.

Unidentified attendee
What year did you start working out there?

[name redacted]
I started in 1974.

Sam Glover
You can contact us directly; folks may not want to talk in a public format. This format just allows us to interact with a group of people and allow an opportunity for input. If you have classified discussions that you want to hold, that can be done as well. We certainly have held those. This is not the only avenue that you have to talk to us regarding this. We appreciate your input in this meeting if you 'd like to do it in a different manner you can contact Laurie and she will set something up where you can contact one of the health physicists.

Good morning everybody, my name is **[name redacted]**. Back in the early days I worked at *inaudible*, back at that point in time we were physically making the weapons, the bombs the triggers. My group inspected these things, this is the end *inaudible* that Hanford was doing at that point in time; we physically had in our hands. We inspected these things 8 hours a day 5 to 6 days a week. Again I'm going back to the early 1960s and I retired *inaudible*. Anyway, all shift long we got these things in our hands, in our face and we were sick about it. Working through glove ports and most of the time we were either standing or sitting on a stool. We got a dose reader in our pocket, we got a gas mask in our back pocket, and we got a ring on our finger. Now we're getting readings from the waist on up. I don't understand how we get a reading from the waist on down. From my knowledge we didn't have any protection from the waist on down. A lot of my coworkers are no longer here, but I just don't understand how they did some of these evaluations with these readings. That's all I've got to say. Thank you very much.

Unidentified attendee
Well, you know I listened to a lot guys last night and everything and I want to say one thing. They did take care of me when I got crapped up at 100N. They took care of me magnificently. It

took them about 5 hours out there to get the stuff out of my nose and then they spent another 3 hours when they took me out to Kadlec. The thing that is really beginning to disturb me listening to these other people talk is why is one person who has a little beryllium and he says he's got 23% another guy says his is 35% but the one that's got 33% he don't get no money, but the guy that's got 23% he's the one that gets money from his claim. Now how can that beryllium be worse in one guy and not the other and the other get paid *inaudible*. Now how do these evaluations…how do they make these decisions like that? You know a lot of guys worked from one end to the other and well, I've worked in every area out there, and I aint *inaudible* but I'm right up there.

I'm journeyman lineman and I've worked everywhere they wanted you to work there. One of them was the 300 area the 3906 Bldg. So crapped up that we couldn't even take the overhead wires and put them underground because it was so crapped up underneath there. But they did come out and check them and they said no, you're not going in there.
There's a lot of things need answers on both sides of the story, that's what I have such a problem with. Who evaluates all this where one person or one job is worse than the other? Now, who do you ask to do that? That's the problem. Like we're doing now, how can you find out why one is different the other? Is that just one of the big top dog supervisors saying well he didn't get crapped up that bad so you're not going to get no money out of it. And I know 3 people that way. One's crapped up so bad the whole side of his face is gone and he didn't get crapped up enough; he didn't get no money out it, and I've been around a lot to see it. So why can't we find out why evaluations are different like that. Hopefully you might be able to send us something or whatever, but I can't find no answers for it. But I'm sure disturbed about it. That's all I have to say today.

Sam Glover
Regarding dose reconstruction, for individual claims in general, NIOSH deals only with radiation induced cancers. DOL in a separate program evaluates beryllium and chemical exposures. When we do a dose reconstruction and you see a POC; that is related only to the radiation and the cancer that you had. And so, that can vary broadly for individuals depending on when your cancer occurred, what your radiation exposure records and the evaluation actually was done. And so, whether he had beryllium or not doesn't change the evaluation of his radiation dose and the cancer. But the cancer type and when it would have occurred could significantly change what the probability of causation number is, that 22% or 35%, so the type of cancer, when it happened, that's the latency issue, those things all affect that probability?

Unidentified attendee
So can you tell us how long it takes for that to come out of your system? That radiation.

Sam Glover
Are you talking about the internal dose?

Unidentified attendee
I'm talking about the cancer in your system. How long does it take for the radiation to expose the cancer in your system?

Sam Glover
There is a curve and basically the probability depends on the type of cancer, and how long the latency. You have an exposure and after that you have a peak and then go back down. So there is a time when it is more likely than at other periods, but if it is very close…you have an exposure and then 5 years later you have cancer, the linkage is very low, it's going to have a very low probability of causation.

Unidentified attendee
I'd like to go back to the cohort and how this comes about. You say that a certain person petitions, through NIOSH or whoever, to have this cohort brought about, is that correct?

Sam Glover
Yes sir.

Unidentified attendee
It could be one person essentially that petitions, or it could be a group of people? My question is; okay, are these people the ones that determine what cancers are involved?

Sam Glover
No.

Unidentified attendee
Or does whoever they petition, do they determine? At the end of your letter that says they have work 250 days and have 22 specified cancers.

Sam Glover
Yes sir.

Unidentified attendee
There are 2 cancers on there that I think should be on there. That's uterine cancer; uterine cancer can act very much similar to ovarian. Okay the other cancer is rectal. There is no rectal cancer on there. My question is who determined what cancers were to be in the cohort?

Sam Glover
Last night this question was raised and discussed quite a bit. Prostate cancer was one of the issues discussed last night. Prostate cancer is not one that is covered as well. The 22 cancers, I called back to NIOSH, that is part of the National Cancer Institute and those were legislated as part of the law. So, the Board…we have another Board member with us, that's Wanda Munn. But at the next Board meeting I believe they're going to request that NIOSH discuss this because a lot of the folks that were there last night wanted an answer and there wasn't a good mechanism to give it back to them. But that was part of the legislation; what is the cancer list? Those are typically the radiogenic cancers and those are I believe established by the National Cancer Institute, put into the law.

Unidentified attendee
Well the difference between colon and rectal is like that! You know, I don't know. The other thing too is that if you had been compensated, cancer compensation and you fall under the cohort; you will not get double compensation.

Sam Glover
That is correct, but I believe it qualifies you for Part E. I think if your cancer couldn't be reconstructed under Part B I think it does have some effect on how Part E is evaluated. Part E is the Department of Labor. That can be things along the lines such as when you can't work, it's a different program, that's where they do the chemical exposures and also radiation exposure is taken into account as part of that subpart.

Unidentified attendee
Also, you know when they did the profiles of the different buildings and that type of thing out in the 300 area at Hanford. Who did these profiles? Were they the people that worked there or were they RCTs that were from Oak Ridge, or all over? That's what gets me is that a lot of the guys that did the profiles on these buildings didn't have a clue as to what went on in those buildings. And they're doing the profiles on them.

Sam Glover
In some cases the people who worked at Hanford were responsible for assisting in the preparation of the TBDs. Ed Scalsky, we have and the Board has been working with us where we have the, what's that term?

Laurie Breyer
Subject expert?

Sam Glover
No when we had the attribution process where they attribute various parts of the TBD to the people who wrote it and where their comments came from and who gave various parts of that.

[name redacted]
Just a little history, I worked at a building that was probably one of the worst buildings out there in the 300 area and in the early 60s and 70s and some of the things that were done out there, you could only work in the area until you had 50 mr and then you had to sit in the lunch room. So what would happen is the guys would leave their badges and their pencils in the change room and go work so they didn't have to be kicked out of the canyon until, you know; because of the 50 mr limit. That happened a lot. Not every day or anything but if there was a job that needed to be done it was more convenient to get the dosimetry out and go ahead and get the job done and then worry about it later. But that was the type of thinking at that point, you know, get the job done.

Laurie Breyer
Can I get your name?

[name redacted]

My name is **[name redacted]** I worked on the site since the early 70s. I'm a welder out there. And these stories I've been listening to and they are so familiar I tell you I've heard a lot of these stories over the years. One of the things that I was concerned about was we did have some dosimetry but we didn't have a lot of extremity dosimetry and you were allowed 300 counts per week while the government wanted to produce plutonium and later on in the years you were only allowed 300 per year. I tell you I don't understand that. When they needed something you were allowed 300 a week and now you're allowed 300 a year, with special permission you could get 500 a week. I just don't understand how that works.

Sam Glover
They have continued to make changes in practices across the DOE and the nation about what the allowable limits are…it used to be 15 rem…..

[name redacted]
They allowed it. But, anyway I've heard a lot of these stories and a lot of these practices that went on out there and I hope that we get this ironed out the way it's supposed to be. That's all I have to say right now. I just wanted to say that. [name redacted] do you have anything to say?

My name is **[name redacted]**, I have been out here since 83, I'm an operator. This kind of reminds me of Agent Orange if anybody is familiar with that; how many claims have been in with that? I understand that we are not here to discuss the claims we have right now. But, it's like the government…I love my country, but it seems like the government has always been a bit screwed up. Anybody that's ever worked for the government or if you work for the government there's going to be a time when you are going to be messed with. If you get sick they're not going to do anything for you, they're going to pitty pal around about it, whatever. Maybe your wife or your kids are going to get something after your gone. That's probably not going to happen either. After a while you just kind of forget about it and give up. They are all kind of hoping we're all just going to do that.

I can tell you a couple horror stories if you want to hear them, about dose and such. When I was working Task 5 I worked in area 880 and this production was going on and they needed lots of fuel moved and we had plutonium that was anywhere from 280 to 300 grams per liter. During the process a lot of the stuff you had in the line would leak and they had bays in there that were 3 inches 4 inches deep and the fluid plutonium would flow in there a nice emerald green color, jade whatever you want to call it, it was kind of attractive. But it would fill up in these bays and if you got more than 2 inches you had a criticality violation. So they'd come in your area and they'd say there is somebody coming through here and we don't want a violation. We don't want to stop production to take care of it so, why don't you take that glove over there and splash some of it into the next bay and fill it up instead or get an ice cream carton and scoop it up and dump it into the canyon so we can slurp it up, because they didn't have time to pump it into where the hell they wanted it to go. So they wanted us to just take a carton or something or just splash it around and move it for them so they wouldn't get a criticality violation and stop their production.

One time we made a canyon and *inaudible* into this area where the pencil tanks were. Not a big canyon like you have at B Plant or Purex or T Plant, but we put up a greenhouse with 3 different sheets of plastic in there between us. We put on 3 pair of rubber shoes and 3 pair of coveralls, and fresh air and we went in there and they told us, "the reason you put on 3 pair of rubber shoes is because if you get out there far enough and when you're working to fix this tank that's leaking and your rubber shoes start sticking to the floor because the nitric acid is eating them, then it's probably time to turn around and get rid one of those pair of rubber shoes. Then get a little closer to the greenhouse and then move yourself out there." You know there was a timekeeper on us then because our dosimetry wasn't good enough to tell when it was time to get out. That's just horror stories that I've got to tell you about and you can write me and call me; I'll talk to you all you want. Thank you.

Sam Glover
What area did you work in? The Separations Plant?

[name redacted]:
That was Task 5 at the time. I'm in T Plant now, that was Purex, T Plant.

My name is **[name redacted]** I worked in 231-5 in 1951 thru [redacted] and I was involved in a very serious contamination incident in 231 and all I want to say is that after that incident there were a great number, like daily for 3 weeks, of bioassay urine samples taken and when they did the dose reconstruction they could only find 2. I think it's tragic that all those records are lost. There were a number of smears taken of me personally when I was taken out of that area where the contamination occurred and…no records. And so I believe it is not really possible to make a realistic dose reconstruction when there are no records of exposure.

Sam Glover
Thank you sir.

Unidentified attendee:
Are you re-evaluating some people's dose reconstructions at this time?

Sam Glover
Do you mean as part of this process or as it changes?

Unidentified attendee
Some of the claims, I've heard because of some Super Plutonium, something that's come out.

Sam Glover
Yes. There is a re-evaluation; there are a number of things. The technical basis document is in the process of being updated and there are changes associated with that. There is also a broad class change across the complex dealing with what's called Super S or Super Insoluble plutonium. And it does affect the dose calculations for plutonium so we are re-evaluating some cases that would be affected by that.

Unidentified attendee
So there would be some mistakes made?

Sam Glover
I wouldn't say mistakes; we use the most claimant favorable model. We have been updating the technical basis trying to make sure that we…. this is the class that we used the most recent ICRP models and the ICRP doesn't deal with Super S plutonium. They recognized that and we had to develop some modifications to that so we could evaluate the dose properly. So I would not say it's a mistake; we are trying to do the best job that we can.

Laurie Breyer
It's not uncommon in all of our documents; the technical basis documents for any site are what we call living docs. Meaning, that as new information becomes available; whether we come to working group meetings or identify changes in scientific information; that will be incorporated into the documents. And it happens. So we don't just say it's this way and it always stays that way. If new information comes available from any source then we can go back and re-evaluate that and re-evaluate the dose reconstructions, and that's happened at many sites.

Unidentified attendee
What's the compensation they are talking about on the cohort?

Sam Glover
It's the same.

Unidentified attendee
The same, $150,000

Sam Glover
Yes, sir.

I'm **[name redacted]**- I was out there from Jan of 44 until [redacted] in the fuel production dept. I was the first one to start handling uranium out there. They hired me to receive uranium coming in but they didn't tell us what it was. The word wasn't mentioned in those days. All they told us was that we should wash our hands before we eat because it might be hazardous to your health. So, I've done about any job in fuel production, fuel that they had and the clean up and so on like that. And I talked to other fellows that signed up and they all got 42.8% chance that their illness was caused by radiation. How can so many of them can get all the same calculation with different periods of time working and so on. I went out in the areas and got my burn out times on clean up all the time for years. I got radiated as much as I cared to around the clean up, around the reactor, but then how come everybody got a 42.8% chance that their illness was caused by radiation?

Sam Glover
I can't speak to that, that's individual claims, but it is unusual.

[name redacted]
I spoke to many of them and they all got 42.8%, you had to be over 50% to be compensated. And they all got 42.8%

Unidentified attendee
Mine's 42.8%

Unidentified attendee
Mine's 42.47

Unidentified attendee
It's in that same neighborhood.

[name redacted]
Yeah, how come they all got the same? When I worked there we didn't have any radiation monitor, I just had a regular badge; same rad badge that construction workers had because I was hired under the construction employment office for the first one from operations to receive the uranium that came in. For years we didn't have film badges or pencils or anything to monitor what we had. But they seem to think that when I tried to tell them what I done they don't listen. I don't know, do they think I'm lying to them?

Sam Glover
We came out during the first meeting and we did take worker input into consideration and we are recommending an SEC class be added.

Unidentified attendee
I have a question. How can they calculate…I've heard that story 42.8 from a lot of people. How can they calculate that figure when they were doing time checks instead of dosimetry checks? That's the part that I can't figure out.

Unidentified attendee
They sit around… *inaudible* 50%.

Unidentified attendee
And I've worked with this guy here and I know what he's been through.

Unidentified attendee
I know a guy, and his wife is a survivor, he has only 42%, as this gentleman says, and they will not compensate her as a survivor. Isn't that ridiculous? Isn't that ridiculous?

[name redacted]
That dust that I got up my nose when I was changing a light guard at 100N and there was no radiation at all but the dust was hotter than a pistol. It took three years to eat my nose out. And they wanted to know where I got into that and I told them changing a light bulb at 100N and they

said, “you can’t get anything like that changing a light bulb”. But I said my nose tells you that I did. You see radiation is evidently different in one person’s mind than dust or radiation or *tentacles* or anything. You kind of wonder who makes the evaluation of what it is, it comes back down to it again One person tells you you’re in bad shape the other guy tells you go on to work. So that’s the thing that really disturbs me, I don’t know if disturbs anybody else but it does me.

Unidentified male
[name redacted], how did you get here today?

[name redacted]
Huh, how’s my ears, or me?

Unidentified attendee
I drive him because he can’t drive.

[name redacted]
Because I can’t see.

Unidentified attendee
I was wondering if you might have gotten into that truck again and tried to drive yourself here. I work with his son. I work with *inaudible.*

Unidentified attendee
Oh no, he can’t see. It’s gotten to the point where the doctors figure that the cancer is sticking on his eyes because he can’t see to drive. I have been doing that for him for quite a while.

[name redacted]
It ain’t the cancer the eyes; I think that’s caused by it, but all of sudden since they worked on my nose now there’s cancer are all over my head, back of my neck, right in my ears looks like a *inaudible* machine. It just keeps moving.

Sam Glover
I’m going to recognize you in just one second. Mike you wanted to talk about the 42.8, please.

Mike Kubiak
I was just suggesting that possibly the claimants that are speaking to this 42.8 issue call NIOSH and supply them with the claim numbers so that they can research it on a claim specific basis to try and answer your questions on a claim level because we can’t really address them here without the data in front of us and we can’t address the personal claims now…so.

Unidentified attendee
Are they talking about percentage of causation?

Unidentified attendee
They just said that’s it, they wouldn’t reconsider.

Mike Kubiak
Because there are so many things that can affect that number; the age of exposure, the age of diagnosis, the type of cancer and I think that's why Sam was saying that its (multiple comments in the background)

Conversation among attendees.

Sam Glover
NIOSH wanted to complete and give you an answer as quickly as possible and because of that, a lot of times, we have used an overestimating method. They have said that this is an overestimate of your dose, but with an overestimate you can't go over 50%. We are saying, ok, this is your dose and we are going to use a maximizing model to evaluate how the radiation transports in your body; what were your internal doses? That's why sometimes you get a dose reconstruction and it comes back lower with the new information because using the additional information they can't use an overestimating method. So that's one of the things that can happen and why you could get a second dose reconstruction that's lower. I know it's hard to understand sometimes and it's…. "why was I 42% and now I am at 22%?".

Unidentified attendee
We had a guy…I know a guy…He was at 42.4% and he had melanoma cancer. Well he turned around, he got another cancer, I mean another dose of melanoma cancer, another spot that they had to take out. And so all of a sudden, well that was five of them now…they said well we'll pay you now because you have had five of them. Your percent looks like it's probably still the same but we are going to pay you. This other guy has only one and he had 42 – 40%. But, "we can't pay him yet because he hadn't had enough cancer yet". It only takes one cancer to kill ya. That's it.

Sam Glover
Skin cancers are often…because they add together; every cancer you get is an additional probability of causation so they get some and that's where sometimes somebody gets two – three…

Unidentified attendee
It only takes one to kill you sir, one…one cancer to kill ya.

Sam Glover
Yep…

Unidentified attendee
What is the formula that you use for multiple cancers for the causation probability on multiple cancers?

Sam Glover
They're not added directly but there is a formula and it's actually available.

Unidentified attendee
What is the formula?

Sam Glover
I can't quote it now…It's on the website…direct website. I'll give it to you at the end of the meeting, ok? I'll pull it up.

Unidentified attendee
You won't be able to understand it.

Sam Glover
No it is actually very straight forward. It's not a difficult addition. It's, it's…we can do it now if we want to sit for a minute. I can pull it up on the screen. It's not a difficult addition. All right.

[name redacted]
I worked out there for a long time. I worked on the sites from 1963-1997 then I came back after retirement for a while too. I've been interested in laboratory workers and how they were…their procedures and so on. I did do an oral interview with [name redacted] who was an early laboratorian here and then he went up into management, he's a graduate chemist, went up into management.

I really think you need to talk to him about early practices in the labs. The early practices they had no rubber gloves and essentially no survey instruments on exit. I asked him how they kept track of whether they were contaminated or not and he said they did a lot of blood tests and bioassays (urinalysis tests). I don't know how long this went on, it went on for some period of time, using.. (inaudible background conversation) techniques in the last, I don't know how long this went on. By 1963 everybody was wearing gloves; however you would rely on one pair of latex gloves for a week. When I came in… As far as this gentleman over here was talking about masks and lack of protection for organics that keep, in general, MIDK, *inaudible,* nitric acid, the other *inaudible,* ammonia hydroxide, all of these chemicals were used in labs. I don't know of a single organic type cartridge that was in the labs, we had plenty of HEPA filters, cartridges for the masks but none of the others. Acetone was used until it became a hazardous material of concern as a drying agent and then we used or were using alcohol, but that was in the 80's.

Unidentified attendee
Oh, this gentleman over here was wondering what they were doing at the other sites as far as… are you getting information from the other sites *inaudible*?

Unidentified attendee
I heard that it was a lot easier to *inaudible* this here, that this is our report *inaudible.*

Laurie Breyer
You can go on their website and you can see every facility and how many dose reconstructions have been done. You can also go to the Department of Labor website and see how many and

how much money the Department of Labor has paid out for each facility. My understanding is the numbers are about the same across facilities. You can go online yourself and check it out on the NIOSH website and if you will find me afterward I'll give you that. You can see how many actual claims have been done and you can go to the Department of Labor website and see how much money has actually been paid out per state or per facilities and compare them that way.

Unidentified attendee
I really think you need to talk to [name redacted], if at all possible. He's not here today, and I don't think he came here last night but he has a lot of information on early practices out there. Well he came from *inaudible* in Chicago and he was there and came out here to work in the laboratory out here in the national laboratories out here. He's still around. I did an oral interview about six months ago with him and it's on file at Crest if you need that. He was complaining about his mind failing, he was pretty chipper when I saw him but you might…if you can't talk to him pick up that whole interview.

Sam Glover
We do appreciate that we had been trying to follow-up with Crest for the formal interview process to make sure we use the information that's gathered from all sources. We do appreciate that.

Unidentified attendee
Unfortunately a lot of those interviews were made by people that were not of a tech…did not have a background in process or laboratory or whatever. They were concerned primarily with the life of the community and so on. I think something could be gained by looking at them. I listened to a couple of them myself and they're interesting.

Sam Glover
Regarding the question for probability of causation, this is on the NIOSH website and it is part of IREP. If you had two, let's say you had five skin cancers; let's just do the first two: you had two skin cancers, each of them with 20% probability of causation. This is the formula that you use.

So you can calculate this, it's going to update it and basically it is, 1 - .2 x 1 - .2 then it would be .8 x .8 which is 1 - .64 and we would have about .36, or 36% probability of causation. So if you… after a while let's say you get basal cell and you get five cancers and now we've got each of them all at the same time at the same exposure information. We will get a best estimate for your case every time. We calculate and every one of them would be 5 x .2, and it is going to calculate a dose And that number is… 67.23%. So some time if you have enough skin cancers they can add up to be above the 50%. This information is available, but I didn't want to leave it out there, it's a straight forward formula and it's publicly available.

Unidentified attendee
So I got 1 skin cancer at 42.32% and it took him 5 of these skin cancers before he'd get 50%?

Sam Glover
It depends on his case. How much dose he got, what years he worked, did he get fluoroscopy in the early years, so a lot of things can contribute to that. So that may be a best estimate or it may be an overestimate.

Unidentified attendee
What's your idea between chronic and acute?

Sam Glover:
The IREP formula chooses the acute formula for gamma exposure because that is the most favorable model. It assumes chronic for neutron because that is also the highest probability of causation. So they choose what is the most claimant favorable when they calculate the probability of causation.

Inaudible

Sam Glover
Plutonium because it delivers dose every day of your life. *inaudible.*

Unidentified attendee
Chronic meaning every day?

Unidentified attendee
If you get an amount of dose in one day that's the acute. Maybe over the years it's chronic.

Unidentified attendee
It has to be pretty acute because a friend of mine done some work in the 300 area that they've talked about, not from underneath *inaudible* the work, so contaminated that they field stripped them, washed them, buried the truck. He's in the grave right now. He had chemotherapy three or four times a week before that.

Laurie Breyer
We can answer questions about how we do dose reconstructions after the meeting. We'll be around but I don't want to get us off track by answering questions right now. While we have everybody here and before people have to start filing out to go to lunch or other obligations, let's try to get back to talking about the work experiences and the questions that were asked at the beginning of the meeting concerning the radiation monitoring practices that you remember, badging, moving between plants and the protection that you used at the time. We want to get back to those worker experiences and questions. How individual dose reconstructions are done and the methods used can be answered by the health physicist after the meeting when they can talk to you about it one-on-one.

Unidentified attendee
Basically the people that were denied claims can fall under this cohort?

Laurie Breyer:
Yes. If you have a dose reconstruction done and it was denied; that was done under your individual claim. If you meet the class definition of the SEC, have 250 days of employment and have one of the 22 SEC cancers then you could still be compensated under the SEC even if your dose reconstruction was less than 50%.

Unidentified attendee
Okay now, who determines whether this cohort goes forward?

Laurie Breyer:
That's what we're working on evaluating right now.

Unidentified attendee
Okay. Will it be, do you have a time period, I mean, are you close?

Sam Glover
To the first one, our report is to the Board. We will be out in Hanford July 17th through the….

Laurie Breyer
17th through 19th we'll be back in Richland to discuss the first petition evaluation report. So it's been completed.

Unidentified attendee
So do you expect it's going forward?

Sam Glover
The first period, we are recommending that the Class be added. The second period our report is due to the Board in late July.

Unidentified attendee
Now this is going to…doesn't matter where they worked as far as they worked at Hanford for the 250 days and had that specific cancer no matter whether they worked in a library or somewhere where there's no radiation involved, the class, they fall under that cohort, they'll get compensated?

Sam Glover
It depends. It depends on how that class is written, and how the Advisory Board also….so we're making a recommendation; the Board is also going to take this into advisement. So the process is still in it's beginning phase even for the first period. So that's part of what areas we are talking about and the specifics that need to be pinned down.

Unidentified attendee
It takes forever too.

Sam Glover
They could be added pretty quickly.

Laurie Breyer
The class definitions…do you go on the website? The petition evaluation report that's already been completed is on the website and it has the Class definition and NIOSH is recommending adding that. So you can go find that on the website and then once the Board makes a recommended decision, that will go on the website as well. So we can talk about the process after the meeting as well as what happens after that.

Thank you and I appreciate the opportunity to talk to you. My name's **[name redacted]** and I was a construction worker. I can give you some plants I build, but I'm use to chemicals that were on the plant and I kind of know when we were out in the dust and dirt and so forth, I don't know whether the dust and dirt of the 131I beam that was released had any affect on where we were or how long did it remain on plants or in the dust because a lot of times we were on *inaudible* bringing in infrastructure. My feeling is that I was rated at 49.18, but I still have cancer. I was operated on yesterday, I was operated on last September, and I'll be operated on longer if I get to, I'll be [identifying information redacted], if I get past that I'll probably be six months into it and I'll have to go back in for re-evaluation. I don't have any idea what chemicals, when chemicals, or what length of activity that I was exposed to. I do know that I have cancer and I do know that doctor's records in the state of Washington they are only required keeping for ten years. I have been trying to find people that know about an operation I had about 50 years ago when they removed…I went in for a hernia operation, they removed the right testicle and they said that they found a tumor on it but back in those days they said most of the time that they removed something, they didn't test for cancer. They just removed it and hoped that it didn't come back.

So I'm kind of at a lunge to get to that last 80, 81%, whatever I'm lacking. I just can't find the records. I just wanted you to know it's tough in the state of Washington to trace back old records that far. I did work on the site in `48 and `49, in the 200-West area and we were not monitored at any time of course. We used to bring in infrastructure from 2-East into 2-West. We used a construction gate; we didn't usually go out through the monitors that the workers went out through, actually, production workers. Thank you for your time.

Sam Glover:
Thank you sir.

Sam Glover
Do we have any people who worked on projects, the polonium projects or the thorium projects that were done? We had some folks last night who worked on thorium. Thorium, polonium. Any folks who maybe worked on the thorium projects, polonium projects, some of the different production projects, not just plutonium and uranium. Hanford made a lot of other stuff as well. We would be interested in hearing from any of you guys that may have worked in reactor areas who may have been around areas where high neutron exposures; such as in the plutonium finishing plant. We had some folks who talked about that some last night.

Unidentified attendee
We had thorium capsules in our building that we transported to the reactor in 308, but I really don't…they were all encapsulated so there was, there would be just, I suppose just dose, some dose there.

Unidentified attendee
What year was that?

Unidentified attendee
Pardon

Unidentified attendee
Do you know what year that was? Roughly.

Unidentified attendee
In the 80's. Not, okay, can't remember what the reactor was in…not 308, but where was the plutonium, where did they make the fuel for 308, that building just across from 308? Anyway there was a small reactor there. The thorium, we transported them from our building to the reactor. That's the only thorium that I can think of.

Sam Glover:
There were some early thorium operations as well. An open source of production and stuff. That was back in the early `60's.

Unidentified attendee
You were asking about neutron dose?

Sam Glover
Yes sir.

Unidentified attendee
Well I know that during, about `86 or `87 we had neutron pencils, bubble pencils, that was kind of an experimental instrument that the neutron passed through the liquid or whatever that was inside and a bubble would appear and then we would count the bubbles. See how much exposure you took. Neutron exposure…and I can't remember how long we wore those, maybe a number of three or four months. And then they turned out that they weren't worth a darn so they quit having us wear them any more. So that might have been a "for practice" that you might want to know about, might want to write down, for neutron.

Another area that we worked in when we were using strings to separate scrap plutonium. There was a lot of neutron exposure in there but they didn't know about it, they didn't realize there was neutron exposure because they weren't looking for it at the time and didn't have the instrumentation in there to tell you. So after working that area for about oh, four months or so, they come in there and says we got to start using instruments in here looking for neutrons cause

you guys might have been getting some exposure and we weren't calculating it or writing it down. So, we're going to give you about…see, how long you been in here, couple a months? I think you might have took about 2,000 but we didn't write it down and maybe you took about a 3,000. And a couple of months later said oh no, no, no, I don't think you took that much we have to re-evaluate that, recalculate it, I think you only took about 500 and, but *you here, you* took the 3,000 we told you, but then both these people are working right next to each other the whole damn time. One of them is maybe too high and you know six pounds bigger or something like that, might have picked up a little more exposure. But these are just some of the instances that went on in Task 5 during the early `80's as far as neutron goes.

Sam Glover:
So I can see where recalculations and things lowering might have a certain sensitivity.

Unidentified attendee
Yeah.

Unidentified attendee
There's a lot of difference between what was done from the `60's to say the middle `80's and from the `80's to then because all the RWPs started coming into affect and before that you didn't have RWPs, you didn't have the air monitoring that they had. You worked in canyons and now… or from the `80's and the `90's you had the air monitoring, a lot of better dosimetry and so those early years are the ones that you had higher doses for one thing because they would accept higher doses and then when the RWPs come in all the stringent work procedures and everything come into affect. So you did have less dose in the later years. But those early years you could get fried on a lot of projects.

Sam Glover
It was certainly challenging.

Unidentified attendee
Well, and you know you think, now especially, like your air monitoring; you worked in a canyon for years without air monitoring and all of a sudden now they put air monitoring in and alarms are going off on a daily basis. You know. What were you doing the first years when there were no alarms, or were no dosimetry, or air monitoring? You're breathing the same air essentially. But now it's this, oh geez, you guys got to clear the canyon, you know. Most of that time could be radon, could be radon, you know.

Sam Glover
Most of that was general area samples right? You didn't wear lapel samplers or personal…

Unidentified attendee
Pardon.

Unidentified attendee
Those weren't personal air samplers, those were general area.

Unidentified attendee
No, no in the walls. There'd be like five of them, or six of them in a canyon along the walls.

Unidentified attendee
Amazing all the years I worked out there where they made the…where they initiated the slush into the pile. You would be working out in that area never knowing how much contamination you would get. The minute they start running those slugs into the pile you still didn't know. But when they came out, they were a beautiful color. You weren't designated how much radiation exposure you had around that plutonium sludge, period. A lot of people didn't understand what they were, didn't even think about it, you had a job to do. A lot of those people are in the ground right now. One of my closest friends is, and another one is on his way. Period.

Laurie Breyer
If there are any more worker comments or there are any petitioners or survivors who want to speak we'd like to open it up now to everybody who has any comments.

Thank you. I'm **[name redacted]** and I worked at Hanford in 1950-`51 and I know that 50 years ago, or 57 years ago, the knowledge about cancer causing agents was nil compared to today. I want to compliment you because I've been in the University of Washington, former Hanford Workers Program, I've been to the National Jewish Hospital, I've dealt with CCSI, the self insured group with the Department of Energy, and the Department of Labor and everyone has been great. The medical people you know have their usual screw ups and but those were straightened out by the national hospital and Jewish Hospital in Denver. The best information I got actually is from NIOSH and one of those is David Sundin. They took the time to call me on the phone and talk with me about the situation. All the stuff that was sent back to me, I think I have a fairly good grasp of the explanation. I know that we wore a badge, we had urine tests, and I was a machinist, milling uranium and I think it was building 313. And in that building they also did a process called camming where they dip the uranium slugs that we manufactured into the beryllium and then formed a hard coat. Looking and researching beryllium and uranium and so forth, I think I've got a pretty good idea of what it causes and so forth. I guess I'm a lucky one because the basal cell cancer that I've had came out at 62.5 or something like that, greater than 50%.

But the thing that bothers me, and why I'm here, is that at the bottom of the page it says that in order to be eligible in your SEC class an employee must meet the definition, have worked in a facility for an aggregate of 250 days. I worked from July 1950 to [redacted] and I got drafted and I was in the service for [redacted] and came back. So my aggregate time is 240 days and it's…the only thing I can see there, if you put down the number of days in anything the problem is going to be with the U.S. Department of Labor and their decisions. Cause that's the only problem I've had is with the U.S. Department of Labor and it's been funny a lot of the times I've talked with them and I talk with them quite often and written back and forth. The thing that really just bugs me is the fact that University of Washington people that worked with me, National Jewish Hospital that have worked with me, the Department of Energy, CCSI, everyone's been neat, except the U.S. Department of Labor and I want to know how the heck can

the man in the street get anywhere with the U.S. Department of Labor. They want you to prove everything and it's, they make it difficult. And it shouldn't be so difficult. I can see why, with your statement about, I assume if you are eligible and you meet the definition of that SEC Class, whatever that is, you have to have 250 days.

Sam Glover
That would be part of the eligibility. Yes sir.

[name redacted]
Okay. What happens in my case where that 240 days and I've designated that I have 62.5%.

Sam Glover
Department of Labor evaluates that. I believe skin cancers are not included in the SEC.

[name redacted]
This was basal cell cancer.

Sam Glover
Basal cell, is that?

[name redacted]
It's included. According to what I've gotten from NIOSH.

Laurie Breyer
If you've already had dose reconstruction that's been completed and the POC was over 50% the SEC Class would not affect that. So they are still two separate things. So again it's your individual claim and it sounds like yours came out okay, over 50%. The 250 days won't apply to your individual claim. The 250 days only applies to people who were fitted into the SEC class and have one of the 22 cancers. I don't believe basal cell is one of those, the 250 days and the 22 cancers were written into the law. So when the law was passed, the law is what mandated the 250 days and the 22 cancers. So when DOL implements it they will have to abide by what was written in that law but I can't speak for Department of Labor or how they would look at it.

Unidentified attendee
The problem with the Department of Labor is that they change answers about every other week.

Unidentified attendee
Hi, my name is [name redacted]. I hired in out at Hanford in 1982, went to work at FD plant in fission product processing where we purified cesium and strontium where it was finally encapsulated and the rest of the facility was built on. I just wanted to talk about a little bit of the radiation power, the monitoring packs that we had at the plant. I worked as an *inaudible* and more times than I can count we used to routinely pull process samples from the process tanks by different parts of the process out there that had been concentrated or running it through the *inaudible* exchange columns. And something, you know, the fields that we saw in the canyons, or in the D plant canyons, very directional shines came up through the floor. The samples we

pulled were out of the decks, what you call deck samplers, in the canyon where we used a vacuum where we drew the actual solution up into a sample cup. Folks called it a deck sampler, and we used what was called a trombone. And this trombone sampling technique we used a syringe where we'd actually draw the solution up into the trombone, where we would pull samples anywhere from .5 ml up to 1.6 ml and the shine that we would have, I've seen…just the period of time that I worked from 1982 to 1984, prior to actually shutting down production here, was in excess of 5 rad. Normally we would tag our CP. Sometimes we would use what's called a Gilmont Shield. It was a lead shield that we would try and place before us to cut down the whole body exposure and it had a lead glass view area to see, supposedly to actually look at the sample while you were trying to pull the sample. However that glass was broke, it was cracked, and it was totally fogged over, so the routine was to actually lean over the shield to actually draw your sample. So, what I'm trying to say is the directional shine, my whole body exposure is probably reduced by the shield, but I took the shine in my head and on my hands. There was no supplemental dosimetry whatsoever.

Really from my experience at Hanford that was really…supplemental dosimetry or radiation practices did not really change until 1993 when the 10CFR law was codified and then there was an actual law to correct occupational radiation monitoring practices.

I just wanted to speak just a little bit to the exhaust filters at the D plant facility. We had four filters that were actually fine. We had a sand filter, when the D plant was originally built it had no filter system on it's stack *inaudible* exhaust, and then they built a sand filter and the sand filter was the emergency backup number 2 until it was deactivated in the `90's. We had four filters that we filtered things that we used. When I came on three of them had already been deactivated, they were, had become, had reached their life period, had saturated and those were alphabetically listed A, B, C, and D was the filter that was on line. A, B and C filters remained in what they call a water seal to block the air flow. We routinely had to go out and refill those filters and the practice, especially for C filter, was you had to climb down into a pit that was approximately 4 feet that was covered with stainless steel diamond plating and one individual went in and opened up the valve and another individual went into the instrument shaft and read the gauges to watch the water bubble fill up. Routine practice for the individual who was actually filling…who's going in doing the valving, was to stand in the pit and when you turn they would hit me about right here and it's a hatch. He pulled the hatch off *inaudible*. Well that came to light that that valve was reading 2.5 rad, during a lot of these practices. And at that time we had very little real time RAD monitoring as far as rm's or something like that, going in the field with operators because it was a, they had established a routine dose for the 291 stack area, but a lot of times we did not have any real time monitoring. What I'm trying to say is once you get the directional shine, your talking about most of it was gamma because it was cesium processing. When you're talking about keeping your dosimeter up here at your chest, once again it's the lower extremities *inaudible*. I listened to the meeting last night and the meeting this morning also, there's a big concern about waist down exposure. Now after working in these same facilities I know the majority of the shine was coming up off the floor. If anybody would like to speak more about practices in D plant I worked there and I was trained by individuals that were in their 60's that were getting ready to retire. This is common practice, this is what they

did at D plant as far as sampling practices, primarily our highest exposure chances for operators anyway and *inaudible.*

Sam Glover
Thank you.

Unidentified attendee
Did I hear where there were other classes that may be added, other types?

Sam Glover
We will make a recommendation to the Board for the first period and then additional we will make it…late July our report is due to the Board for the second period, so NIOSH will make a recommendation at that time as to whether additional classes should be added.

Unidentified attendee
How will we the workers know the result of that, will we be sent a letter or…

Sam Glover
It's actually already posted to our website.

Laurie Breyer
When we complete a Petition Evaluation Report, that's posted on the website, it's sent to the petitioners and it's sent to the Board. At least the first part of the petition, from `42 through `46 will be discussed here in Richland at the Board meeting on July 17, 18, and 19 and you can attend the meeting. If you don't have a chance to attend the meeting the Board's recommendation will be placed on our website. The next step after the Board makes a recommendation is that it goes to the Secretary of the Department of Health and Human Services. He then makes a final decision. That also gets posted on our website and then it goes to Congress. Congress has 30 days to either act to reverse or expedite the Secretary's decision. Once a final decision is completed, if a class does get added, the Department of Labor will automatically notify all the claimants that would be affected by that. The Department of Labor is responsible for contacting people who could be affected by an addition of a new class. I would suggest you check our website because of the way it is listed out and when anything gets added it's put on there.

Unidentified attendee
What if your website is *inaudible.*

Laurie Breyer
You can either call or e-mail the information on here. My contact information is up on the slide, as is a letter. You can call me, or e-mail me. I would suggest that after the July meeting you can call me or e-mail me.

Sam Glover
You have somebody in the back Laurie.

Unidentified attendee
Have there been any studies on the military when they were out here, as far as doses etc., etc.?

Sam Glover
The military's under a different program sir.

Unidentified attendee
What is the program? I'm just trying to ask what type the program is. *Inaudible*

Sam Glover
It's run through DTRA.

Unidentified attendee
Well I got recalled back there *inaudible*, and was transferred all the way to Pennsylvania up to Ft. Lewis and from Ft. Lewis to out here in Camp Hanford. I was stationed out here for almost two years. Approximately every twenty days out of the month we bivouacked right out there in the area. In my bivouac I was Charlie *inaudible* 518, right next to D area. We were never monitored that I know of. Of anybody coming around or taking dosages, or anything. Including the Army, including the military. Now those people must have got some kind of dosage. Especially people like me that slept out there for God's sake, twenty days out of the month. They call that the forward area. Do you know of anybody or any entity that has done anything to find out what if any type of exposure or whatever that those people got out there?

Sam Glover
After the meeting we'll get you contact information. I'll see if I can get you the name of the program. Is that fair?

Unidentified attendee
Okay. I appreciate that.

Laurie Breyer
Can I get your name?

Unidentified attendee
Oh. [name redacted]. A good Irish name.

Laurie Breyer
If there are still comments or questions we'll be here after the meeting to talk one on one. If you have any questions about the SEC feel free to come speak to me about dose reconstruction methods or health physicist will be around. But any other comments?

[name redacted]
My name's [name redacted] and I was a radiation monitor for General Electric Company from [redacted] `55 to[redacted], when I transferred to Battelle. And in the early days when I was

hired in, the first summer and second summer we routinely, on overtime, would survey the Army bases for specs. At the time there was a lot of specs throwed out from one of the separation building and we surveyed the ground area, the mess hall, and all across the whole desert. The lab and one row of bunkers and would with GM's and walking sticks and covered the whole area. And we did that routinely the first two summers. And after that we blew finding specs, and these specs were picked up by Davie Jones Construction laborers. They'd carry a bucket and we'd point them out a PEC and they'd pick it up and put it in a bucket and then these would end up going to the burial ground. And that was done the first summer, the summer of `55 I believe and the summer and of `56 also, and it was all on overtime. And they were having a lot of trouble with specs from one of the separation buildings. And we never did, to my knowledge, find anything in the quarters or the mess halls and we surveyed them all from clear over on the west side to clear up on top of the what would be the west side out on the Y barricade. We surveyed that one up there, we surveyed them all. And the one's we didn't survey that I was involved in was across the river. Anything across the river we didn't survey. And we found a lot of specs, but in the Army camp if we found any it was picked up and I don't recall finding any in the Army camps.

Sam Glover
Thank you.

[name redacted]
Some of the other things that was kind of interesting I was radiation monitor in one of the buildings in 300 area for a number of years and they would haul waste out to the burial grounds. And there's a lot of information in them burial grounds that people don't know about. And it's been awful hard to find information that's there, but I know one time covering up the burial ground as a monitor I rode on a bulldozer kept pushing the dirt in to set the dose rate for the bull dozer operator. And as soon as he would push the dirt over, well, then the radiation was covered up. We didn't have any problem. But there was a lot of hot material buried out there. There's culverts stood on end, you probably got a lot of information on that. They were very high. And one of the buildings, 327. 327 building sent a lot of paint cans out that were pretty warm, pretty warm. We had a lot of fun trying to get a lot of that waste out there. That's about all I have right at the moment.

Oh and another thing happened in 325 building when I worked in the labs as a monitor, they, the chemists purified formethium 147, which is a real soft isotope. And the instruments we had would not detect formethium 147. A CP would detect a large amount of it, but a regular GM wouldn't detect it. And they had to come up with a small instrument that fit on the GM to be able to detect that. And we had that formethium 147 all over 325 building at that time. And I'm not sure what kind of records you have on that.

Unidentified attendee
We tracked it all over 300 area.

[name redacted]
Yeah. It was tracked all over because people were going, hand *inaudible* counters would not pick it up. And we had a really good time and I really can't think of anything else right off hand. But I know that burial grounds are real important thing and there was a lot of exposure taken just burying a lot at that place out at 300 area. Thank you.

Sam Glover
Thank you.

[name redacted]
My name is [name redacted] and I worked in 100 areas most of the time. One thing I'd like to talk about is the neutron exposure. The old reactors seemed to be *inaudible*, graphite moderator started to grow and *inaudible conversation*.

Sam Glover
So would people work around that area?

[name redacted]
Pardon?

Sam Glover
Would people work around that area where they had the string of neutrons?

[name redacted]
Yeah. Yeah. They had a routine monitoring program we went to the top one way and down the other. We were recording findings 50 feet in the air at three o'clock in the morning. You didn't want to go down and climb back up the other side, it was essentially prohibited if anyone knew it would jump through that beam coming through there. It was high. Also the neutron exposure coming through the uppermost *inaudible*, if we did not have ear phones on you could never detect the fine pencil wide beams coming through the vertical rods that go into the reactors, they were coming out of that hole extruding through the roof. Sometime when you would go up there and make a neutron survey you couldn't find anything. You put on the earphones and go back up there you would find these beams. Consequently the place was restricted part of the time, another group would come along and say there was nothing there, it was unrestricted and a lot of workers would go out there because there was very little work going on up there. We had problems with neutron film. Some didn't wear a neutron film. And you'd be exposed to quite a bit of neutrons and the film would always come out zero. Consequently when we got into a high neutron zone we'd use time keepers instead. But of course that's years later after we found out the zones…*inaudible.*

Sam Glover
So when you have a monitor with you you'd be saying that there's a neutron exposure and that you wouldn't see anything on the films?

[name redacted]
Right.

"Inaudible"
…junction boxes is referring to the D.R. reactor *inaudible*. Normally *inaudible* vapors was floating through the air around *inaudible* P.M. With the D.R. reactor they had a junction box close to the reactor. If you were inside the building you were fine but you go out there on a swing shift at night during the inversion and you could read the air with the CP instead of the GM. In other words you're reading millirad per hour. And they tracked the *inaudible* vapor and *inaudible*, and it showed no problems with the isotopes involved. But what they didn't do, they didn't check it when we had a ruptured fuel *inaudible*. Now the mixture would change drastically, get in your eyes and everything else. And of course when you got a ruptured fuel element you want you to shut the reactor down. But you had to make sure *inaudible.* But you wanted to make sure. You don't shut the reactor down if there is no rupture. If possible you'd sample, otherwise they'd say "oh we're not sure yet" so we keep operating then we'd sample again and again, trying to hold it over to the next shift to let on-coming supervisors have to shut it down. Sometimes the ruptured fuel element gases came out for periods of hours instead of minutes. That's it. I got a lot more but that's enough.

Sam Glover
Thank you very much.

Unidentified attendee
He was talking about neutrons and jogged my memory. In 324 building they use to have californium and they had it in a cave made out of, it seemed to me like it was wax or wax or not a gamma shield. And they'd have cracks in this pile. And they'd get beams of neutron radiation coming out from this californium, but we never did have any neutron dosimetry at that time. And I don't think our dosimetry was reading those neutrons. That was in 324A, it was inside of a cell but you could go, you could go into the cell because it was clean. They had it, I can't remember what they were doing, but I do know that I remember it was lying there leaking so around that cave.

Chuck Nelson
You remember the years?

Unidentified attendee
Late `70's, probably.

[name redacted]
Yeah my name's still **[name redacted]** and I worked at Appollo reactors out there, and never missed anything out there. A friend of mine worked with me in the N area. They had a farm across the river. He died of radiation cancer. His boy died of radiation cancer. The only reason I know this is because the daughter called me from Tacoma and asked what she could do about it because they were claiming they were down winders. You've heard nothing more about it. So I told her to call 550, 550 to get some information from her because I've heard no more from

them. But those down winders over there on the other side of the river were exposed to all this contamination that went out of these stacks and they're doing nothing for them and it upsets me. I still have a…I go to music on Wednesday night and talk to a down winder that, a widow of a down winder, and they've done nothing for her either. It's disturbing to know that you worked all those years out there and never even realized the contamination a person got into and then have someone call you from Tacoma that their father died and their brother is dying with radiation poisoning. It's pretty tough brother. Believe me. I'll quit preaching on this. I quit.

Laurie Breyer
Any more comments?

Unidentified attendee
No. No.

Unidentified attendee
I'm considered a *inaudible*. I've been working with this since this first started. I've got records I've got of my father's that there's several years…actually a few years are missing and in his group, the special cohort group, I understand *inaudible* and it does say radiation. *Inaudible* …died of brain cancer, my dad had several problems and they all stem I'm sure from radiation. His dosage was high as it was and I sent things in and I've never had the dose reconstruction. And it doesn't have any *inaudible*, it was thirty something, I don't know. It isn't, I says well if someone got when they begin, he got that at 25 then he had, anyway, I wanna know why my dad *inaudible*. They say that their looking at them and denying that they haven't done everything that their supposed to do and if they haven't followed *inaudible* how can they deny someone or put them off? *Inaudible*, it might bad and I just don't understand that. *Inaudible* Why didn't they look at and give me an answer?

Laurie Breyer
I'm sorry, are you asking why your dose reconstruction has not been completed yet?

Unidentified attendee
Yeah. Why isn't anyone…. hasn't.

Sam Glover
Why don't we talk about that after, that is getting into the individual dose reconstructions.

Unidentified attendee
My name's **[name redacted]** *inaudible*. I'm a *inaudible* for 47 years. I'm a former Hanford worker. Some of the things that are really disturbing to me about the special exposure cohort, especially at Rocky Flats, because I'm a national advocate, it's a fact that these people aren't recognized for special exposure status. We're all special exposure cohort status because you don't have records and some of us don't have all the records that we need, especially dosimetry. My dosimetry happened to be manipulated, so you can't take my personal dose, which I had had a dose reconstruction which is inaccurate. You can't take my personal dose and say that it's qualified or not qualified because you just don't know. [name redacted] dad we're talking about

individuals, but he took 30,072 millirem in his special exposure group and that's compensable under the law. And you should know that. I don't know that I need to talk anymore to this group because I've already read many many items about this and I've decided that the judicial branch that would not recognize special exposure cohort issues, they would not recognize that *inaudible*. So that's all I have to say today.

Laurie Breyer
All right, any other comments?

Unidentified attendee
I'd like to thank the Board for coming out here. I know that there are a lot of upset people and I'd like to apologize because last night when I spoke I sounded accusatory and I'm sorry, I didn't really mean to. It is an emotional issue for all of us and I'm sorry that I was not as professional as I should have been when I spoke. I would like to tell everybody to please call your Senators, call your Representatives, and tell them that you feel that the Hanford site profile that has been done from which the technical basis documents and the information that the dose reconstructors use, tell them that you don't believe that this information is accurate. Tell them that after listening to everybody speak that you believe that the dose reconstruction process is most likely flawed and that you would like to have the Hanford site profile re-evaluated and the technical basis documents re-evaluated. Thank you NIOSH for your time.

Sam Glover thanked everyone for coming out and concluded the meeting by encouraging everyone to sign in and to contact Laurie Breyer for any further follow up.